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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,277	02/24/2004	Maurizio Tamburro	CM2601MC2	3843

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EXAMINER

PIERCE, JEREMY R

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 01/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/785,277	<b>Applicant(s)</b> TAMBURRO ET AL.	
	<b>Examiner</b> Jeremy R. Pierce	<b>Art Unit</b> 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment filed on November 18, 2005 has been entered. Claim 1 has been amended. Claims 1-10 are currently pending. The prior art rejections set forth in the last Office Action have not been overcome by the current amendment. However, modification of them is made in accordance with the newly claimed limitation.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d) on November 18, 2005, which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 9, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohnishi et al. (U.S. Patent No. 6,524,508).

Ohnishi et al. disclose chitosan containing acrylic fibers (Abstract). The fibers may be used in clothes or various other fabrics (column 1, lines 10-15), and such a fabric would constitute the claimed "absorbent member." The chitosan is formed into a salt and penetrated into the acrylic fibers so that it will not be washed away by subsequent post-treatments (column 7, lines 32-44). The average particle size of the chitosan is between 1 and 100 nm (column 4, lines 21-31). These chitosan containing fibers would comprise the claimed "region located on said absorbent member" because the fibers are present on the fabric. The article of clothing would be hydrophilic because Ohnishi et al. disclose that the acrylic fibers containing chitosan may be mixed with other known hydrophilic fibers such as cotton, rayon, and wool (column 6, lines 59-65). Also, the acrylic fibers that contain chitosan are also themselves hydrophilic because they swell in water (column 7, lines 25-31). With regard to claims 2, 9, and 10, the region of chitosan particles will be present on the surface when the acrylic fibers are present on the surface of the fabric, and Ohnishi et al. disclose the fabric may be made entirely of the acrylic fibers (column 6, lines 48-51).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelkenberg (U.S. Patent No. 5,496,933) in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569).

Kelkenberg teaches providing chitosan salts as powder in hygienic articles (column 4, lines 20-24). Kelkenberg teaches the particles may be water soluble (column 3, lines 35-47). Kelkenberg discloses that the particle sizes are much less than 1 mm (column 2, line 25) and that some particles are smaller than 1 micron (column 2, lines 26-27). Although the reference discloses using particles smaller than 1 micron, Kelkenberg does not specifically teach the average particle size to be less than 300 microns. Kelkenberg is also silent as to the structure of the hygienic article.

Kellenberger et al. teach a diaper material comprising a topsheet, backsheet, and absorbent core (See Figure 2). The absorbent core is hydrophilic (column 4, line 43) and also comprises superabsorbent powder (column 5, lines 9-23). The fibers of the core material would comprise the claimed "absorbent member." Kellenberger et al. teaches that the absorbent particles in the outer region of the core should have particles averaging less than 300 microns in size (column 6, lines 47-49). Sackmann et al. also teach that smaller particle sizes in superabsorbent materials allows for more rapid liquid intake (column 3, lines 44-48). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use the Kelkenberg chitosan salt particles at the average size of 300 microns or less in a diaper structure taught by Kellenberger et al. and to place those particles in the region adjacent the backsheet in order to provide

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a diaper with rapid intake towards the bottom of the core, as taught by both Kellenberger et al. and Sackmann et al.

With regard to claims 2, 9, and 10, one can see about 100% of the back surface of the diaper in Kellenberger et al. is covered by regions of superabsorbent particles (Figures 2-4 and 6). Additionally, it is noted that the surface need not be covered 100% with particles to meet the claim limitation, but only needs to be covered with 100% regions containing particles. With regard to claim 4, lowering the average particle size to between 10 and 800 nm is adjusting a result effective variable because Sackmann et al. teach that particle size is variable that affects the rate at which the particles absorb liquid. It would have been obvious to a person having ordinary skill in the art at the time of the invention to use chitosan salt particles with an average size of 10 to 800 nm, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272 (CCPA 1980). With regard to claim 5, Kelkenberg teaches only 20% of the chitin is acetylated (column 2, lines 46-48). With regard to claim 6, the chitosan can be mixed with lactic acid (column 4, line 16). With regard to claim 7, Kellenberger et al. teach the absorbent core batt of the diaper is air-formed (column 4, lines 43-44). With regard to claim 8, Kellenberger et al. teach the superabsorbent should be present in the absorbent core in an amount between 12 and 15% by weight of the batt. Thus, the claimed amount of 0.1 to 200 g/m<sup>2</sup> of superabsorbent particles would be met so long as a person of ordinary skill in the art used an absorbent core that weighed between 0.8 and 1,333 g/m<sup>2</sup>. It would have been obvious to a person having ordinary skill in the art at the time of the invention

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to use between of 0.1 to 200 g/m<sup>2</sup> of superabsorbent particles in the absorbent core of Kellenberger et al., since such range is so broad that practicing outside of it would make it impractical to actually produce an absorbent article.

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,833,487 in view of Kellenberger et al. and Sackmann et al. The claims of the '487 Patent disclose an absorbent member containing chitosan salt particles. Although the claims are silent as to the size of the particles, it would have been obvious to a person having ordinary skill in the art at the time of the invention to use chitosan salt particles at the size of 300 microns or less in the region adjacent the backsheet in order to provide a diaper with rapid intake towards the bottom of the core, as taught by both Kellenberger et al. and Sackmann et al. Also, it would be obvious to use particles

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between 10 and 800 nm in size because optimizing result effective variables involves only routine skill in the art, as set forth above.

9. Claims 1-10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of U.S. Patent No. 6,867,287 in view of Kellenberger et al. and Sackmann et al. The claims of the '287 Patent disclose an absorbent member containing chitosan salt particles. Although the claims are silent as to the size of the particles, it would have been obvious to a person having ordinary skill in the art at the time of the invention to use chitosan salt particles at the size of 300 microns or less in the region adjacent the backsheet in order to provide a diaper with rapid intake towards the bottom of the core, as taught by both Kellenberger et al. and Sackmann et al. Also, it would be obvious to use particles between 10 and 800 nm in size because optimizing result effective variables involves only routine skill in the art, as set forth above.

10. Claims 1-10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,887,564 in view of Kellenberger et al. and Sackmann et al. The claims of the '564 Patent disclose an absorbent member containing chitosan salt particles. Although the claims are silent as to the size of the particles, it would have been obvious to a person having ordinary skill in the art at the time of the invention to use chitosan salt particles at the size of 300 microns or less in the region adjacent the backsheet in order to provide a diaper with rapid intake towards the bottom of the core, as taught by both Kellenberger et al. and Sackmann et al. Also, it would be obvious to use particles



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between 10 and 800 nm in size because optimizing result effective variables involves only routine skill in the art, as set forth above.

11. Claims 1-10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of copending Application No. 10/785,464. Although the conflicting claims are not identical, they are not patentably distinct from each other because the '464 Application claims an absorbent member having chitosan salt particles with similar particle size ranges. Also, similar dependent claims are present.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. Claims 1-10 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 11/021,634. Although the conflicting claims are not identical, they are not patentably distinct from each other because the '634 Application claims an absorbent member having chitosan salt particles with similar particle size ranges. Also, similar dependent claims are present.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Response to Arguments***

13. Applicant's arguments filed November 18, 2005 have been fully considered but they are not persuasive.

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14. Applicant argues that Ohnishi et al. fail to disclose an absorbent member comprising at least one region located on said absorbent member with particles of chitosan salt because the particles of chitosan in Ohnishi et al. are dispersed within the interior of the individual fibers. The Examiner agrees that the chitosan particles in Ohnishi et al. are dispersed within the fibers. However, one can read the fabric of Ohnishi et al. to comprise the claimed "absorbent member." Upon doing so, then a fiber comprising the chitosan salt can be read to meet the claim limitation of "at least one region located on said absorbent member with particles of ... chitosan" because the fiber of Ohnishi et al. would be located on the fabric in a region.

15. Applicant argues that Ohnishi et al. do not disclose an absorbent member because they disclose individual fibers arranged to form a spun yarn, woven cloth, and nonwoven fabric. However, it is unclear how the recitation of an "absorbent member" is outside the scope of yarn or a fabric. A fabric can absorb so it is an absorbent member.

16. Applicant argues Ohnishi et al. do not disclose the affinity to water of the fibers disclosed therein. However, Ohnishi et al. teach the fabric material can comprise cotton fibers (column 6, line 63) so the absorbent member of Ohnishi et al. is hydrophilic. Additionally, Ohnishi et al. teach the acrylic fiber having the chitosan particles dispersed therein swells in water (column 7, line 27), so they too are hydrophilic.

17. Applicant argues Kelkenberg fails to teach particles of chitosan on the absorbent member. However, Kelkenberg teaches incorporating the particles into cellulose containing absorbent, hygienic articles (column 4, lines 18-24). The absorbent member would be the fibers of the cellulosic core within a hygienic article.

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18. Applicant argues that Kelkenberg fails to disclose particles with a mean diameter of not more than 300 microns. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, Kelkenberg lays the groundwork for using smaller particle size by disclosing the chitosan particles should have a particle size a lot lower than 500 microns (column 3, lines 4-6). Kellenberger et al. and Sackmann et al. are used to fortify the idea that using particle sizes within the claimed range are well known and provide various benefits, as set forth above.

19. Applicant argues that Kellenberger et al. and Sackmann et al. fail to teach chitosan. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Kellenberger et al. was used to show the structure of a hygienic article and both Kellenberger et al. and Sackmann et al. were used for the teaching of smaller particle size in superabsorbents.

20. Concerning the double patenting rejections, Applicant argues that US 6,833,487, US 6,867,287, and US 6,887,564 fail to claim particles with a mean diameter of not more than 300 microns. Applicant also argues that Kellenberger et al. and Sackmann et al. fail to teach using chitosan. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

***Conclusion***

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (571) 272-1479. The examiner can normally be reached on normal business hours, but works flextime hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JRP

Jeremy R. Pierce  
January 12, 2006

*Elizabeth M. Cole*  
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